IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re continuation-in-part patent application of:	)	Examiner
Christopher Morgan	)	Group Art Unit
Serial No.	)	
Filed: February 28, 2002	)	
LUMINESCENCE ASSAYS	)	February 28, 2002

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, DC 20231

IN THE SPECIFICATION

Please add the following at page 1, line 1:

This application is a continuation-in-part of prior pending Application Serial No. 09/381,838.

A substitute clean copy of page 1 of the specification is attached hereto, as well as a marked up copy showing the changes made.

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Respectfully submitted

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LUMINESCENCE ASSAYS

This application is a continuation-in-part of prior pending Application Serial No. 09/381,838. The present invention relates to luminescence assays based on transfer of excitation energy from a donor species to an acceptor species.

Fluorescence, phosphorescence and related technologies (herein referred to as "luminescence" to include in this context all processes where energy is emitted subsequent to an excitation process triggered by absorption of electromagnetic radiation) are now widely used in a variety of analytical schemes. Luminescent materials are used as tracers on the basis of the high detection sensitivity that can be achieved, but are also used as environmentally responsive "probes" to monitor local conditions, such as pH, ion concentrations, oxygen tension etc. Luminescent species can also be used to detect and sometimes quantify the proximity of an agent which is able to modify the emission process on close approach or contact.

It is well known that energy can be transferred by a variety of means from an excited species (the "donor") to a second species able to act as an energy acceptor. One of the most common examples of such transfer involves a radiationless process known as resonance energy transfer, the efficiency of which usually has an inverse sixth power dependence on distance between donor and acceptor. Distance-dependent energy transfer between donor and acceptor species has been used in a variety of analytical and assay formats. An analyte might be detected on the basis of its ability to bind to a site where it can function as one member of the energy transfer donor-acceptor pair. Alternatively, the assay might be conducted in a competitive format where the analyte displaces a labelled analogue from a site and the displacement can be detected and quantified by changes in energy transfer between the site and the analogue. One common type of assay involves the detection of an analyte on the basis of its ability to bind two recognition molecules such as antibodies simultaneously. In this "sandwich" format, the proximity of the two bound species can be determined by energy transfer between labels bound to the antibodies. A recent example of an energy transfer assay using a luminescent cryptate of long emissive lifetime to transfer energy to a short-lived acceptor species is given by G.

MARKED UP VERSION OF SPECIFICATION PAGE 1

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